

**CLAIMS:**

1. A method for evaluating a composite developmental plan, the composite plan being indicative of a simultaneous arrangement of a first delivery system and a second delivery system in a building, the first and second delivery systems being composed of elements, the method comprising steps of:

- providing a standard, the standard specifying a first distance; and
- for each pair of a first element present in the first system and a second element present in the second system, determining whether the distance between first and second elements in the composite plan, is greater than the first distance.

2. The method of Claim 1 wherein the composite plan is provided by superimposing a developmental plan for the first system and a developmental plan of a second system.

3. The method of Claim 1, wherein the standard further specifies a second distance, the second distance being greater than the first distance, and the method further comprises a step of determining for each pair of a first element present in the first system and a second element present in the second system, whether the distance between first and second elements is between the first and second distance.

4. The method of Claim 1, further comprising a step, for one or more pairs of a first element present in the first system and a second element in the second system for which the distance between the first and second elements is less than the first distance, of rectifying the composite plan to produce a rectified composite plan in which the distance between first and second elements in the composite plan is greater than the first distance.

5. The method of Claim 3, further comprising a step, for one or more pairs of a first element present in the first system and a second element in the second system for which the distance between the first and second element is less than the second distance, of rectifying the composite plan to produce a rectified composite plan, in

which the distance between first and second elements in the composite plan is greater than the second distance.

6. A method for arranging  $n$  delivery systems in a building, the method comprising the steps of:

- 5 (a) providing a developmental plan for each of the  $n$  systems;
- (b) arranging the systems in a hierarchy,  $S_1, \dots, S_k, \dots, S_n$ , where  $S_k$  is the  $k$ -th system in the hierarchy;
- (c) for  $k = 2, \dots, n$ 
  - (ca) for  $i=1, \dots, k-1$ ;
  - 10 (caa) providing a composite developmental plan of system  $S_k$  and system  $S_i$ ;
  - (cab) evaluating the composite plan by the method of the invention.

7. The method of Claim 6 further comprising a step (cac) for one or more values of  $k$  for which a first element in the system  $S_k$  and a second element in the 15 system  $S_i$ , for which the distance between the first and second elements is less than the first distance, of rectifying the composite plan to produce a rectified composite plan in which the distance between the first and second elements in the composite plan is greater than the first distance.

8. A method for arranging  $n$  delivery systems in a building, the method comprising 20 the steps of:

- (a) providing a developmental plan for each of the  $n$  systems;
- (b) arranging the systems in a hierarchy,  $S_1, \dots, S_k, \dots, S_n$ , where  $S_k$  is the  $k$ -th system in the hierarchy;
- (c) for  $k = 2, \dots, n$ 
  - (ca) for  $i=1, \dots, k-1$ ;
  - 25 (caa) providing a composite developmental plan of system  $S_k$  and system  $S_i$ ;
  - (cab) evaluating the composite plan by the method of the invention.

9. The method of Claim 8 further comprising a step (cac) for one or more values 30 of  $k$  for which a first element in the system  $S_k$  and a second element in the system

$S_i$ , for which the distance between the first and second elements is less than the second distance, of rectifying the composite plan to produce a rectified composite plan in which the distance between the first and second elements in the composite plan is greater than the second distance.

5 10. A system for evaluating a composite developmental plan, the composite plan being indicative of a simultaneous arrangement of a first delivery system and a second delivery system in a building, the first and second delivery systems being composed of elements, the system comprising a processor configured to determine, for each pair of a first element present in the first system and a second element present in the second system, whether the distance between the first and second elements in the composite plan is greater than a first predetermined distance.

10 11. The system according to Claim 10 wherein the processor is further configured to generate a composite plan from two developmental plans.

15 12. The system according to Claim 10 wherein the processor is further configured to determine, for each pair of a first element present in the first system and a second element present in the second system, whether the distance between the first and second elements is between the first predetermined distance and less than a second predetermined distance.

20 13. The system according to Claim 10, wherein the processor is further configured, for one or more pairs of a first element present in the first system and a second element present in the second system for which the distance in the composite plan between the first and second element is less than the first predetermined distance, to rectify the composite plan so as to produce a rectified composite plan in which the distance between the first and second elements in the composite plan is greater than the first distance.

25 14. The system according to Claim 12 wherein the processor is further configured, for one or more pairs of a first element present in the first system and a second element present in the second system for which the distance in the composite plan between the first and second element is less than the second predetermined distance, to rectify the composite plan so as to produce a rectified

composite plan in which the distance between the first and second elements in the rectified composite plan is greater than the second distance.

15. A system for arranging a delivery system in a building, each system having a developmental plan, the systems being arranged in a hierarchy  $S_1 \dots S_k \dots S_n$ , where

5  $S_k$  is the k-th system in the hierarchy, the system comprising a processor configured to:

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for k=2, ..., n
for i=1, ...k-1
  (a) producing a composite plan of the developmental plans of  $S_i$  and  $S_k$ ;
10  and
  (b) for each pair of a first element present in the i-th system and a second
       element present in the k-th system, determining whether the distance
       between the first and second elements in the composite plan is below
       a first predetermined distance  $A_{i,k}$ .
15 16. A system for arranging a delivery system in a building, each system having a
       developmental plan, the systems being arranged in a hierarchy  $S_1 \dots S_k \dots S_n$ , where
        $S_k$  is the k-th system in the hierarchy, the system comprising a processor configured
       to:
20  for k=2, ..., n
20  for i=1, ...k-1
  (a) producing a composite plan of the developmental plans of  $S_i$  and  $S_k$ ;
       and
  (b) for each pair of a first element present in the i-th system and a second
       element present in the k-th system, determining whether the distance
25  between the first and second elements in the composite plan is below
       a second predetermined distance  $A_{i,k}$ .
17. The system according to Claim 10 further comprising a memory for storing
       data indicative of one or more developmental plans.
18. The system according to Claim 15, further comprising a memory for storing
30  data indicative of one or more developmental plans.
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19. The system according to Claim 16, further comprising a memory for storing data indicative of one or more developmental plans.

20. The method according to Claim 10 further comprising an input device for inputting data indicative of one or more developmental plans into the memory.

5 21. The method according to Claim 15 further comprising an input device for inputting data indicative of one or more developmental plans into the memory.

22. The method according to Claim 16 further comprising an input device for inputting data indicative of one or more developmental plans into the memory.

10 23. The method according to Claim 10 further comprising a memory for storing data indicative of one or more composite developmental plans.

24. The method according to Claim 15 further comprising a memory for storing data indicative of one or more composite developmental plans.

25. The method according to Claim 16 further comprising a memory for storing data indicative of one or more composite developmental plans.

15 26. The system according to Claim 10 further comprising a display device for displaying a developmental plan or a composite developmental plan.

27. The system according to Claim 15 further comprising a display device for displaying a developmental plan or a composite developmental plan.

28. The system according to Claim 16 further comprising a display device for 20 displaying a developmental plan or a composite developmental plan.

29. The system according to Claim 27 wherein the display device is a CRT.

30. The system according to Claim 27 wherein the processor is further configured to indicate in a displayed composite developmental plan elements in the plan that do not comply with a standard.

25 31. The method according to Claim 27 further comprising an input device for amending a displayed composite developmental plan.

32. The method according to Claim 31 wherein the input device is a computer mouse and a displayed composite developmental plan is amended using the mouse to drag one or more elements in the displayed plan to a new location in the plan.

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33. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for assessing two or more developmental plans, each developmental plan being indicative of an arrangement of a delivery system in a building, the method 5 comprising steps of:

- (i) producing a composite developmental plan, the composite plan being indicative of spatial relationships among the delivery systems in the building;
- 10 (ii) determining whether the composite plan complies with one or more building standards.

34. A computer program product comprising a computer useable medium having computer readable program code embodied therein for assessing two or more developmental plans, each developmental plan being indicative of an arrangement of a delivery system in a building, the computer program product 15 comprising:

- computer readable program code for causing the computer to produce a composite developmental plan, the composite plan being indicative of spatial relationships among the delivery systems in the building;
- computer readable program code for causing the computer to determine 20 whether the composite plan complies with one or more building standards.